SC8a Acids, alkalis and indicators

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| Word | Pronunciation | Meaning |
| acid | **ass**‑id | A solution with a pH of less than 7 and that contains an excess of hydrogen (H+) ions. Acids turn litmus red. |
| acidic |  | Containing or having the properties of an acid. (adjective) |
| acidity |  | The amount of acid in a solution. |
| alkali | **alk**‑al‑lie | A solution with a pH of more than 7 and that contains an excess of hydroxide (OH–) ions. Alkalis turn litmus blue. |
| alkaline |  | Having a pH of more than 7.  |
| alkalinity |  | The amount of alkali in a solution. |
| aqueous solution | **a**-kwee-us | A solution with water as the solvent. |
| **concentration** | con-sen-**tray**-shun | A measure of how much solute is dissolved in a solvent such as water. (Units g dm-3 or mol dm-3) |
| indicator |  | A substance that changes colour depending on the pH of a solution. |
| neutral | **new**-tral | A substance that is neither an acid nor an alkali. Neutral solutions have a pH of 7 and the same concentrations of hydrogen (H+) and (OH–) ions. |
| pH scale |  | A numerical scale up to 14 that measures the acidity or alkalinity of a solution based on the concentrations of hydrogen (H+) and (OH–) ions. |
| **universal indicator** |  | An indicator, containing a mixture of different pH indicators, designed to produce a range of colours depending on the pH. |

SC8b Looking at acids

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| Word | Pronunciation | Meaning |
| **concentrated** | **con**-sen-tray-ted | Containing a large amount of solute dissolved in a small volume of solvent. |
| **dilute** | dYe-**loot** | Containing a small amount of solute dissolved in a large volume of solvent. |
| **dissociate** | dih-**sOh**-shee-ayt OR dih-**sOh**-see-ayt | To split up or separate into different parts. For example, acid molecules dissociate into H+ ions and negative ions when they dissolve in water. |
| **pH meter** |  | Electronic device used to measure the pH of a solution. |
| **strong acid** |  | An acidic solute that dissociates completely into ions when it dissolves. |
| **weak acid** |  | An acidic solute that does not dissociate completely into ions when it dissolves.  |

SC8c Bases and salts

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| Word | Pronunciation | Meaning |
| **base** |  | Any substance, soluble or insoluble, that neutralises an acid, forming a salt and water only. |
| **crystallisation** | cris-tal-I-**zay**-shun | The process of forming crystals. |
| **filter** (verb) |  | To remove or separate a solid from a liquid by passing the mixture through a porous material. |
| **neutralise** (verb) | **new**-trall-eyes | To make a solution neither acidic nor alkaline. During neutralisation a base reacts with an acid, forming a salt and water. |
| **salt** |  | An ionic compound produced by a neutralisation reaction. |
| **state symbols** |  | Standard set of symbols written after chemical formulae to indicate the state of a substance. These are: solid (s), liquid (l), gas (g) and dissolved in water (aq) |

SC8d Alkalis and balancing equations

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| Word | Pronunciation | Meaning |
| **alkali** | **alk**-al-lie | A solution with a pH of more than 7 and that contains an excess of hydroxide (OH–) ions. Alkalis turn litmus blue. A soluble base. |
| **balanced equation** | eck-**way**-shun | A way of writing out what happens in a chemical reaction using symbols to represent the substances involved. |

SC8e Alkalis and neutralisation

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| Word | Pronunciation | Meaning |
| **burette** | b’your-**ett** | Apparatus used to accurately measure the volume of solution that has been added during a titration. |
| **end-point** |  | In a titration, when just enough solution has been added from the burette to react with all the solution in the flask. |
| **pipette** | pip-**ett** | Apparatus used to accurately measure a set volume of a solution, which can be used in a titration. |
| **titration** | tie-**tray**-shun | Method used to mix acids and alkalis in the correct proportions to produce a solution containing only salt and water. It can be used to find the concentration of an acid or an alkali. |

SC8f Reactions of acids with metals and carbonates

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| Word | Pronunciation | Meaning |
| **effervescence** | eff-er-**ves**-ens | Fizzing or a stream of bubbles produced during a reaction. |
| **half equation** |  | A balanced equation, including electrons, that shows what happens to one substance during a redox reaction. |
| **ionic equation** |  | A balanced equation that only shows the ions that react together. The spectator ions are not included in the equation. |
| **oxidation** | ox-id-**ay**-shun | A reaction in which a substance gains oxygen or in which an atom or ion loses electrons. |
| **reactivity series** |  | A list of metals in order of reactivity with the most reactive at the top. |
| **reduction** | re-**duk**-shun | A reaction in which a substance loses oxygen or in which an atom or ion gains electrons. |
| **spectator ions** |  | These are ions that do not change during a reaction. |

SC8g Solubility

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| Word | Pronunciation | Meaning |
| **precipitate** | pre-**sip**-et-tate | An insoluble product formed when solutions of two soluble reactants are mixed. |
| **precipitation**  | pre-sip-et-**tay**-shun | A reaction in which an insoluble product is formed from two soluble reactants in solution. |